

Document No. FCF-PO-PROC-0001

Revision Initial Release

## Fluids and Combustion Facility Procedure

# Use of EDAD Test Laboratories by MRDOC Exhibit 1 Contractor

*Date: September 28, 2000*

*Approved by Chief Engineer, Fluids and Combustion Facility, 7810*

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## Signature Page

*(Official signatures on file with the FCF Project Control Specialist)*

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## Change Record

<b>Rev.</b>	<b>Effective Date</b>	<b>Description</b>
Initial Release	9/28/00	Initial Release

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## 1.0 INTRODUCTION

This procedure defines the process by which the Microgravity Research, Development and Operations Contract (MRDOC) Exhibit 1 Contractor can gain access to the test laboratory services provided by the Glenn Research Center (GRC) Engineering Design and Analysis Division (EDAD).

### 1.1 Purpose

The purpose for this procedure is to clarify the specific steps that will be followed within the Fluids and Combustion Facility Project to provide access to the Structural Dynamics Laboratory (SDL), Microgravity Emissions Laboratory (MEL), Electromagnetic Interference (EMI) Laboratory, and Acoustical Testing Laboratory (ATL). This procedure is necessary to take into account and document project-specific steps and the contractual aspects of the process.

### 1.2 Scope

This procedure applies to all FCF personnel, the EDAD Laboratory Managers (when performing testing for FCF) and, to a degree, the MRDOC Exhibit 1 Contractor. This procedure does not account for any contractual limitations on the amount of testing that the MRDOC Exhibit 1 Contractor can request. Testing in excess of that provided for in the contract will need to be addressed to the Contracting Officer.

## 2.0 REFERENCES

### 2.1 Reference Documents

<b>Document Number</b>	<b>Document Title</b>
GRC-P7700.002	Task Initiation & Resource Management Procedure
GRC-P7830.001	Task Order Process for Engineering Support Service Contracts
GRC-W7720.001	EMI Laboratory Request and Use Instructions
GRC-W7735.001	Structural Dynamics Laboratory Request and Use Instructions
NPG 1441.1	Records Retention Schedules

*Note: The following work instructions have not yet been written but will be applicable to this process in the future; the procedure will be updated when these documents are released:*

- *Microgravity Emissions Laboratory Request and Use Instructions*
- *Use Instructions and Acoustical Testing Laboratory Request and Use Instructions*

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## 2.2 Records and Forms

The following records are generated as part of this procedure.

- Test Requests/Requirements and Test Plans
- Test Reports
- Test Report Transmittal Letters

Except for purposes of reference, the FCF Project Control Specialist, or designee, shall maintain these records per NPG 1441.1 as well as pertinent GRC and organizational procedures and instructions.

These records shall be maintained for the entire life of FCF plus one year, per the pertinent time limits specified in NPG 1441.1, or per the Center/organizational procedures and instructions, whichever time period is longest.

## 2.3 Acronyms/Definitions

<b>Acronym/Word</b>	<b>Definition</b>
<b>ATL</b>	Acoustical Testing Laboratory
<b>CE</b>	Chief Engineer
<b>EDAD</b>	Engineering Design and Analysis Division
<b>EMI</b>	Electromagnetic Interference
<b>FCF</b>	Fluids and Combustion Facility
<b>GRC</b>	Glenn Research Center
<b>MEL</b>	Microgravity Emissions Laboratory
<b>MRDOC</b>	Microgravity Research, Development and Operations Contract
<b>QA</b>	Quality Assurance
<b>SDL</b>	Structural Dynamics Laboratory
<b>TR</b>	Technical Representative
<b>WI</b>	Work Instruction

## 3.0 RESPONSIBILITIES

### 3.1 MRDOC Exhibit 1 Contractor

The MRDOC Exhibit 1 Contractor is responsible for requesting the tests and providing the test requirements. In addition to supplying the equipment to be tested, they are responsible for providing support equipment and procedures necessary to operate, handle, and mount the equipment under test. They are responsible for supporting the testing, including handling and running the equipment under test, if necessary.

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### **3.2 EDAD Laboratory Manager**

The EDAD Laboratory Manager is responsible for the scheduling and operation of the laboratory being utilized. There is one EDAD Laboratory Manager for each of the laboratories covered by this procedure. The EDAD Laboratory Manager also ensures that the laboratory operates in accordance with its own work instructions (see applicable documents). Within this procedure, activities defined for the EDAD Laboratory Manager may be actually performed by their laboratory staff.

### **3.3 FCF Chief Engineer**

The FCF Chief Engineer is responsible for assuring that FCF funding is in place to perform the testing and formally providing the deliverables to the MRDOC Exhibit 1 Contractor following test completion.

### **3.4 FCF Project Control Specialist**

The FCF Project Control Specialist is responsible for maintaining the official FCF records of the testing performed.

### **3.5 FCF Discipline Lead**

The pertinent FCF Discipline Lead (government) supports the FCF Chief Engineer in assuring that FCF Project needs are being met and maintains cognizance of testing and any unexpected outcomes. The pertinent FCF Discipline Lead, either at their own discretion or at the request of the FCF Project Manager or FCF Chief Engineer, is responsible for supporting test readiness reviews, observing tests, and reviewing test reports. At the discretion of the Chief Engineer, the pertinent Discipline Lead is responsible for preparing the formal cover letter for transmittal of the test report to MRDOC. The FCF Structures Lead covers the SDL, MEL and ATL. The FCF Power lead covers the EMI Laboratory.

### **3.6 GRC Quality Assurance**

GRC Quality Assurance personnel provide a surveillance function to assure that testing meets project quality assurance provisions.

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## 4.0 PROCEDURE

### **Responsible Person or Organization**

### **Block No.**

### **Activity**

MRDOC Exhibit 1  
Contractor

**4.1**

Requests a test to be run in an EDAD Laboratory, following the procedure found in the applicable work instruction:

- EMI Laboratory - GRC-W7720.001
- Structural Dynamics Laboratory - GRC-W7735.001

*Note: The following documents are under development and will be applicable work instructions in the future:*

- *Microgravity Emissions Laboratory Request and Use Instructions*
- *Acoustical Testing Laboratory Request and Use Instructions*

EDAD Laboratory  
Manager

**4.2**

Schedules and prepares for testing using test laboratory staff. Obtains test plan approvals, if required.

EDAD Laboratory  
Manager

**4.3**

Notifies the FCF Chief Engineer (CE) and the appropriate FCF Discipline Lead (Power for EMI testing and Structures for structural dynamics, microgravity emissions and acoustical testing) that a test has been scheduled and requests any additional needed funding/resources not already in place. Notifies the appropriate Task Order Contractor Technical Representative, if laboratory staff is provided under a blanket FCF task order.

FCF Chief Engineer

**4.4**

Obtains/puts in place any additional resources/funding needed to support the testing per: GRC-P7700.002 - Task Initiation and Resource Management Procedure and GRC-P7830.001 - Task Order Process for Engineering Support Service Contracts.

EDAD Laboratory  
Manager

**4.5**

Determines if a test plan is required to be prepared:

- If a test plan is required, it is sent to GRC Quality Assurance for review and approval at least two weeks prior to planned testing. Then continue with block 4.6.
- If a test plan is not required, continue with block 4.7.

GRC Quality  
Assurance

**4.6**

Reviews test plan to assure that it meets GRC quality assurance requirements and safety (if applicable). Review and approval will be performed within two weeks of receipt.

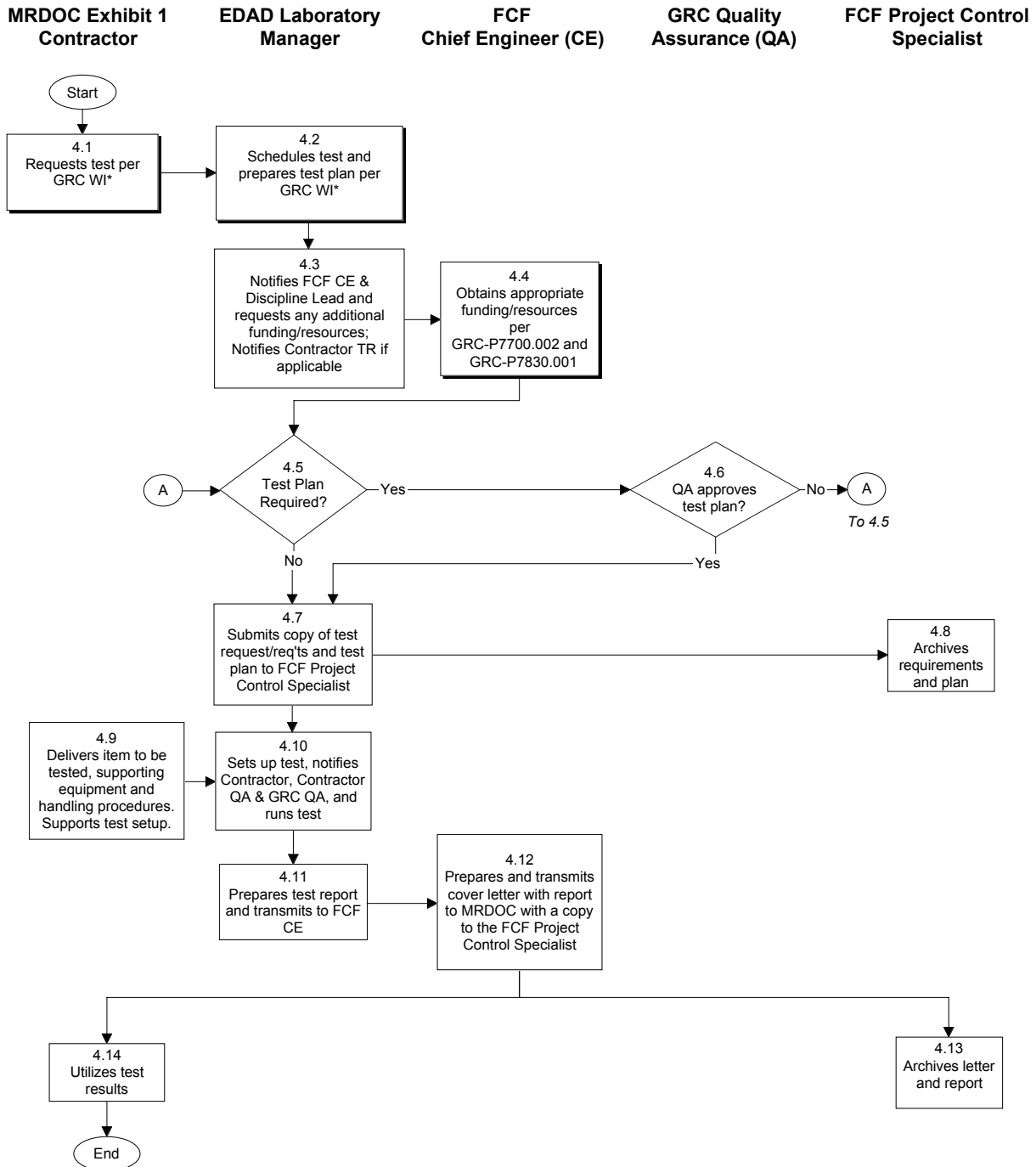
- If the plan is approved, continue with block 4.7.
- If the plan is not approved, go back to block 4.5 and revise the test plan.

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<b><u>Responsible Person or Organization</u></b>	<b><u>Block No.</u></b>	<b><u>Activity</u></b>
EDAD Laboratory Manager	<b>4.7</b>	Submits a copy of the test request/requirements along with any test plan(s) generated, per the laboratory's work instruction, to the FCF Project Control Specialist. This information may be included in the final report, in which case it would not need to be submitted separately.
FCF Project Control Specialist	<b>4.8</b>	Places the information into the FCF configuration management system.
MRDOC Exhibit 1 Contractor	<b>4.9</b>	Delivers the items to be tested and any support equipment, fixtures and procedures necessary to operate, handle, and mount the equipment under test. Supports the testing, including handling and running the equipment under test, if necessary. Supports pre-/post-test reviews, as necessary.
EDAD Laboratory Manager	<b>4.10</b>	Sets up and performs test using test laboratory staff. Notifies Contractor, Contractor Quality Assurance (QA), and GRC QA prior to performing tests.
EDAD Laboratory Manager	<b>4.11</b>	Prepares a report documenting the results of the test and transmits to the FCF Chief Engineer.
FCF Chief Engineer	<b>4.12</b>	Prepares a formal cover letter and transmits it along with the report to the MRDOC Exhibit 1 Contractor. A copy is provided to the FCF Project Control Specialist.
FCF Project Control Specialist	<b>4.13</b>	Places the information into the FCF configuration management system.
MRDOC Exhibit 1 Contractor	<b>4.14</b>	Utilizes the test results as necessary.



## 5.0 FLOW DIAGRAM



**\* 4.1 and 4.2 Notes:**

The following are applicable work instructions:

- GRC-W7735.001 for the Structural Dynamics Lab
- GRC-W7720.001 for the EMI Lab

Work instructions are also under development for the Microgravity Emissions and Acoustical Testing Labs and will be required in the future.